

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**  
**BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

|                                      |   |                            |
|--------------------------------------|---|----------------------------|
| APPLICANT: Rea et al.                | ) |                            |
|                                      | ) |                            |
| SERIAL NO.: 10/657,687               | ) | Examiner: V. Ronesi        |
|                                      | ) |                            |
| FILED: September 8, 2003             | ) | Art Unit: 1714             |
|                                      | ) |                            |
| TITLED: LUBRICATING OIL COMPOSITIONS | ) |                            |
| FOR MARINE ENGINES                   | ) |                            |
|                                      | ) |                            |
|                                      | ) | Atty. Docket No. 2002L007A |

Assistant Commissioner for Patents  
Washington, DC 20231

**BRIEF ON APPEAL**

Sir:

This is an appeal from the decision of the Examiner to finally reject claims 1 through 19, all claims remaining in the above-identified patent application. This final rejection was presented in an Office Action mailed August 31, 2006. The Notice of Appeal was filed November 29, 2006.

This brief is being filed in triplicate. It is requested that the requisite fee set forth in 37 CFR Section 1.17(f) be charged to Deposit Account No. 05-1710.

**REAL PARTY IN INTEREST**

All rights to the above-identified application were assigned, via an unrecorded assignment, from the named inventors to Infineum International Limited, a company incorporated in England. Infineum International Limited is the real party in interest to these proceedings.

**RELATED APPEALS AND INTERFERENCES**

There are no other appeals or interferences relating to this application and no decision in any other appeal or interference impacts the decision in the present appeal.

### **STATUS OF CLAIMS**

The application now contains claims 1 through 19, as set forth in the attached Appendix. Claims 1 through 19, all claims remaining in this application, stand rejected.

### **STATUS OF AMENDMENTS FILED SUBSEQUENT TO FINAL REJECTION**

An Amendment after Final was filed on October 27, 2006 which only contained remarks and no amendments and considered by the Examiner. In light of the Amendment after Final, the Examiner reversed all but one of the previous rejections. The single remaining rejection is the subject of this Appeal Brief.

### **SUMMARY OF THE INVENTION**

The present invention is a lubricating oil composition suitable for use in a four stroke marine engine which comprises an oil of lubricating viscosity containing an admixture of (a) 1 - 3.75 wt.% of an ashless dispersant; (b) a metal detergent; (c) an oil soluble molybdenum compound in an amount sufficient to provide 15 - 1,000 ppm molybdenum in the composition; (d) a zinc dialkyl dithiophosphate in an amount sufficient to provide at least 1,200 ppm phosphorus in the composition; (e) a rust inhibitor system comprising (i) as a first rust inhibitor, an ethoxylated C<sub>4</sub>-C<sub>18</sub> alkyl phenol having 2-10 moles of ethylene oxide per mole in combination with a second rust inhibitor selected from the group consisting of (ii) a glycerol ester of a C<sub>8</sub>-C<sub>22</sub> fatty acid, (iii) a half ester of a C<sub>8</sub>-C<sub>22</sub> alkyl or alkenyl succinic acid and a C<sub>2</sub>-C<sub>4</sub> alkylene glycol and (iv) a C<sub>8</sub>-C<sub>22</sub> alkyl or alkenyl succinic acid or anhydride.

The ashless dispersant is described at page 4, line 5 to page 6, line 29. The metal detergent is described at page 6, line 30 to page 8, line 19. The oil soluble molybdenum compound is described at page 8, line 20 to page 13, line 13. The zinc dialkyl dithiophosphate is described at page 13, line 22 to page 14, line 24. The rust inhibitor system is described at page 14, line 25 to page 15, line 19.

### ISSUES

(1) Whether claims 1-19 are unpatentable on the ground of nonstatutory obvious-type double patenting over claims 1-14 of US Patent No. 6,642,188 alone or in view of Holubec.

### GROUPING OF THE CLAIMS

The application now contains claims 1 through 19 that stand or fall together.

### ARGUMENT

The Examiner alleges claims 1-19 are unpatentable on the ground of nonstatutory obvious-type double patenting over claims 1-14 of US Patent No. 6,642,188 alone or in view of Holubec. The present invention as recited in independent claim 1 is a lubricating oil composition comprising a rust inhibitor system comprising (i) as a first rust inhibitor, an ethoxylated C<sub>4</sub>-C<sub>18</sub> alkyl phenol having 2-10 moles of ethylene oxide per mole in combination with a second rust inhibitor selected from the group consisting of (ii) a glycerol ester of a C<sub>8</sub>-C<sub>22</sub> fatty acid, (iii) a half ester of a C<sub>8</sub>-C<sub>22</sub> alkyl or alkenyl succinic acid and a C<sub>2</sub>-C<sub>4</sub> alkylene glycol and (iv) a C<sub>8</sub>-C<sub>22</sub> alkyl or alkenyl succinic acid or anhydride. The rust inhibitor system of the present invention is a specific **two component** system.

The Examiner alleges that the present invention including the recited rust inhibitor system is obvious in light of US Patent No. 6,642,188 alone or in view of Holubec. The Examiner's allegation is incorrect. US Patent No. 6,642,188 teaches the following as examples of individual rust inhibitors: an ethoxylated nonylphenol or C<sub>4</sub>-C<sub>18</sub> alkyl phenol rust inhibitor; a fatty acid; an alkenyl succinate half ester; a fatty acid soap; ester of fatty acid and polyhydric alcohol; ethoxylated amines; a fatty acid amine; an oxidized paraffin; an alkyl polyoxyethylene ether; nonionic polyoxyalkylene polyols and esters thereof; other polyoxyalkylene phenols; anionic alkyl sulfonic acids; metal salts of alkyl naphthalene sulfonic acids such as "NA-SUL 129" which are commercially available from King Industries; and dialkyl hydrogen phosphites or phosphates.

Contrary to the Examiner's allegations, US Patent No. 6,642,188 does not teach a **specific two component** rust inhibitor system comprising (i) as a first rust inhibitor, an ethoxylated C<sub>4</sub>-C<sub>18</sub> alkyl phenol having 2-10 moles of ethylene oxide per mole in combination with a second rust inhibitor selected from the group consisting of (ii) a glycerol ester of a C<sub>8</sub>-C<sub>22</sub> fatty acid, (iii) a half ester of a C<sub>8</sub>-C<sub>22</sub> alkyl or alkenyl succinic acid and a C<sub>2</sub>-C<sub>4</sub> alkylene glycol and (iv) a C<sub>8</sub>-C<sub>22</sub> alkyl or alkenyl succinic acid or anhydride. US Patent No. 6,642,188 teaches individual rust inhibitors, one of which is the first rust inhibitor (i) of the present invention and some of which are compounds that can, at least in a generic sense, be used as the second rust inhibitor (ii). Based on the teaching of the reference, one might be able to pick and choose from all of the rust inhibitors taught by US Patent No. 6,642,188 to arrive at the **specific two component rust inhibitor system** of the present invention, but "obvious to try" is not the law. It may very well be the case that certain combinations of the rust inhibitors taught by US Patent No. 6,642,188 do not provide sufficient rust inhibition to work in the present invention. The law requires a specific teaching to combine the first rust inhibitor (i) and the second rust inhibitor (ii) as recited in the present invention. Such teaching is not present in US Patent No. 6,642,188.

Not only is the specific two component rust inhibitor system of the present invention not taught by US Patent No. 6,642,188, it does not even teach first rust inhibitor (i) and the second rust inhibitor (ii) on an individual basis with the requisite specificity to render claim 1 obvious. For example, US Patent No. 6,642,188 teaches a fatty acid, but it does not teach glycerol ester of a C<sub>8</sub>-C<sub>22</sub> fatty acid as recited in claim 1.

No where in the specification of US Patent No. 6,642,188 is the specific two component rust inhibitor system as recited in claim 1 taught or suggested. As a result, it is not obvious to invent such a rust inhibitor system based on the teaching of US Patent No. 6,642,188.

The Examiner further alleges that Holubec teaches lubricant compositions and teaches common anti-rust additives which can be used in mixtures. Holubec teaches suitable anti-rust components can be aliphatic hydrocarbon substituted succinic acids, aliphatic hydrocarbon substituted succinic anhydrides and esterified reaction products obtained by the partial esterification of the aliphatic hydrocarbon substituted acids or

their anhydrides with at least one alkylene oxide or alkylene glycol. The teaching of Holubec relevant to rust inhibitors only adds to the list of possible rust inhibitors one could pick and choose from in an attempt to negate the patentability of the present invention.

As stated above, it may very well be the case that certain combinations of the rust inhibitors taught by US Patent No. 6,642,188 and Holubec do not provide sufficient rust inhibition to work in the present invention. Further, "obvious to try" is not the law. The law requires a specific teaching to combine the first rust inhibitor (i) and the second rust inhibitor (ii) as recited in the present invention. Similar to US Patent No. 6,642,188, Holubec does not teach the **specific two component rust inhibitor system** of the present invention.

Also, similar to US Patent No. 6,642,188, Holubec does not teach first rust inhibitor (i) and the second rust inhibitor (ii) on an individual basis with the requisite specificity to render claim 1.

Thus, for the reasons discussed above, claim 1 is patentable over US Patent No. 6,642,188 in view of Holubec.

Claims 2-19, directly or indirectly, depend from claim 1 of the present invention and recite the invention in varying scope. For the reasons discussed above, US Patent No. 6,642,188 and Holubec, either alone or in combination, do not teach or suggest the lubricating oil composition comprising a rust inhibitor made up of (i) as a first rust inhibitor, an ethoxylated C<sub>4</sub>-C<sub>18</sub> alkyl phenol having 2-10 moles of ethylene oxide per mole in combination with a second rust inhibitor selected from the group consisting of (ii) a glycerol ester of a C<sub>8</sub>-C<sub>22</sub> fatty acid, (iii) a half ester of a C<sub>8</sub>-C<sub>22</sub> alkyl or alkenyl succinic acid and a C<sub>2</sub>-C<sub>4</sub> alkylene glycol and (iv) a C<sub>8</sub>-C<sub>22</sub> alkyl or alkenyl succinic acid or anhydride as recited in claim 1 and in varying scope by claims 2-19. As a result, claims 2-19 are patentable over US Patent No. 6,642,188 in view of Holubec.

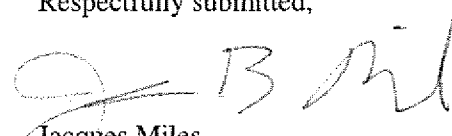
#### SUMMARY

For the foregoing reasons, Appellants submit that US Patent No. 6,642,188 alone or in view of Holubec fail to render claims 1-19 unpatentable on the ground of nonstatutory obvious-type double patenting over claims 1-14 of US Patent No. 6,642,188

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alone or in view of Holubec. Accordingly, Appellants request that the Examiner's decision to finally reject the claims of this application on the ground of nonstatutory obvious-type double patenting be reversed, and that the appealed claims be deemed allowable.

Respectfully submitted,



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### **Claims Appendix**

This listing of claims will replace all prior versions and listings of claims in the application:

1. (original) A lubricating oil composition suitable for use in a four stroke marine engine which comprises an oil of lubricating viscosity containing an admixture of
  - (a) 1 - 3.75 wt.% of an ashless dispersant;
  - (b) a metal detergent;
  - (c) an oil soluble molybdenum compound in an amount sufficient to provide 15 - 1,000 ppm molybdenum in the composition;
  - (d) a zinc dialkyl dithiophosphate in an amount sufficient to provide at least 1,200 ppm phosphorus in the composition;
  - (e) a rust inhibitor system comprising (i) as a first rust inhibitor, an ethoxylated C<sub>4</sub>-C<sub>18</sub> alkyl phenol having 2-10 moles of ethylene oxide per mole in combination with a second rust inhibitor selected from the group consisting of (ii) a glycerol ester of a C<sub>8</sub>-C<sub>22</sub> fatty acid, (iii) a half ester of a C<sub>8</sub>-C<sub>22</sub> alkyl or alkenyl succinic acid and a C<sub>2</sub>-C<sub>4</sub> alkylene glycol and (iv) a C<sub>8</sub>-C<sub>22</sub> alkyl or alkenyl succinic acid or anhydride; and
  - (f) optionally, a viscosity modifier, said composition having a NOACK volatility less than 15%.
2. (original) The composition of claim 1 wherein the second rust inhibitor is the glycerol ester and the composition further comprises a third rust inhibitor selected from the group consisting of (i) a half ester of a C<sub>8</sub>-C<sub>22</sub> alkyl or alkenyl succinic acid and a C<sub>2</sub>-C<sub>4</sub> alkylene glycol and (ii) a C<sub>8</sub>-C<sub>22</sub> alkyl or alkenyl succinic acid or anhydride.
3. (original) The composition of claim 1 wherein the glycerol ester is a mixture comprising about 55 wt.% glycerol monooleate, 40 wt.% glycerol dioleate and about 5 wt.% glycerol trioleate.

4. (previously presented) The composition of claim 1 wherein the ethoxylated alkyl phenol is a 4 mole ethoxylate of nonylphenol.
5. (original) The composition of claim 1 wherein the half ester is propylene glycol dodecyl succinate.
6. (original) The composition of claim 1 wherein the alkyl or alkenyl succinic acid or anhydride is dodecyl or isomerized octadecenyl succinic acid anhydride.
7. (original) The composition of claim 1 wherein each rust inhibitor is present in a range of 0.05 to 1.5 wt.% of the composition.
8. (original) The composition of claim 4 wherein the second rust inhibitor is dodecyl succinic acid, and each rust inhibitor is present in the range of 0.10 to 0.40 wt.%.
9. (previously presented) The composition of claim 1 wherein the metal detergent is a calcium sulfonate or a calcium phenate or a mixture thereof.
10. (original) The composition of claim 1 wherein the dispersant is a polyisobutenyl succinimide wherein the polyisobutenyl has an Mn of 1600-2500.
11. (original) The composition of claim 1 wherein the molybdenum compound is a molybdenum dithiocarbamate.
12. (original) The composition of claim 1 wherein the molybdenum compound is a trinuclear compound of the formula  $\text{Mo}_3\text{S}_k\text{L}_n\text{Q}_z$  wherein L represents oil soluble organo groups, n is 1-4, k is 4-7 and Q is a neutral electron donating compound and z is 0.5.
13. (original) The composition of claim 1 wherein the zinc dialkyl dithiophosphate is present in an amount sufficient to provide up to 2,000 ppm P in the composition.



14. (original) The composition of claim 13 wherein the zinc dialkyl dithiophosphate comprises secondary alkyl groups having 2 to 8 carbon atoms.

15. (original) The composition of claim 1 wherein the viscosity modifier is shear stable and is present in an amount of 0.5 to 5.0 wt.%.

16. (original) The composition of claim 1 further comprising one or more phosphorus-free antioxidants.

17. (original) The composition of claim 1 further comprising an antifoam agent.

18. (original) The composition of claim 1 further comprising a lube oil flow improver.

19. (previously presented) A method of operating and lubricating a four cycle marine engine which comprises supplying to the engine with a lubricating oil composition according to any of claims 1-18.

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**Evidence Appendix**

None

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**Related Proceedings Appendix**

None